

MOBILITY & TRANSPORTATION

Mobility is an essential ingredient in ensuring the community's quality of life. This section of the Plan examines the current status of mobility in the city and county as reflected in the area's transportation facilities and services. This review includes Streets and Highways, Street System Maintenance, Public Transportation, Parking, Trails and Bicycle Facilities, Railroads, Airports and Airfields, and Goods and Freight Movement.

S TREETS AND HIGHWAYS

EXISTING PATTERN OF STREETS AND HIGHWAYS

The city and county are served today by an extensive system of streets and highways. This system ranges from roads capable of safely carrying thousands of vehicles each hour at high rates of speed, down to local residential streets that help form the character of neighborhoods. The street system further plays a vital role in commerce by carrying products to all portions of the city and county. The rural road network also links the farming community to key transportation centers, allowing their commodities to be shipped around the world.

Section line roads form the basic layout for the city's and county's existing street system. Spaced approximately one mile apart, these roads create the underlying grid pattern found throughout the county.

This roadway pattern was established nearly a hundred and fifty years ago by the United States government. Surveyors were sent west to the Plains states to create a patchwork of one mile squares. These squares became the building blocks upon which the earliest settlements and farming communities were formed. The one mile squares remain today – not only as reminders of the very first efforts to plan the region's development, but also as an inherited human pattern upon which tomorrow's community will be crafted.



Over many decades, and standing witness to advances in transportation technology (most notably the introduction of the internal combustion engine), this venerable pattern of section line roads has been enhanced and augmented. The section line roads are used today as Lincoln's main system of arterial streets. In the newer areas of the city, section

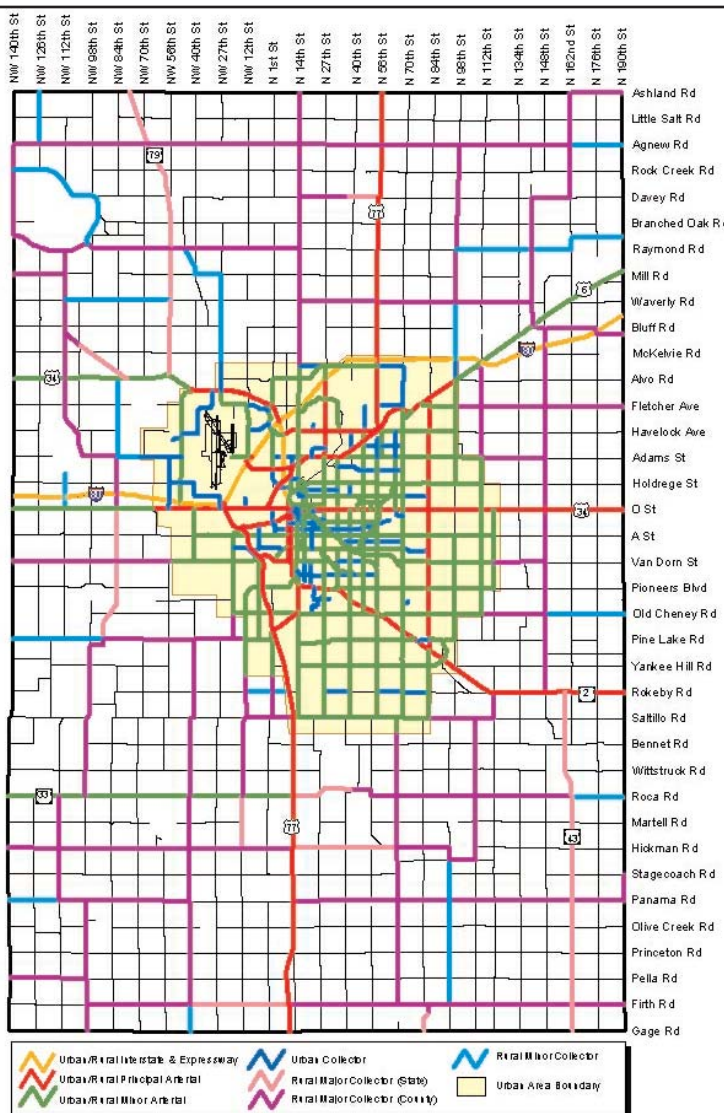
line roads are typically built with four through lanes, with turning lanes added to ease the flow of traffic along these corridors.

In older areas of the city, section line streets may have two or four through lanes, with lanes sometimes provided to handle turning vehicles. The grid pattern has also been accented in the traditional areas of Lincoln through the use of arterial streets at the half section (or half mile) line. This has created a more extensive street grid pattern in older parts of the community.

To aid in moving traffic through and across the community, other routes have been layered on top of the county's underlying one mile grid pattern. From the Federal Interstates (such as I-80 and I-180), to State highways (such as Highway Nos. 2, 6, 34, and 77), and to local facilities (such as Capital Parkway, Cotner Boulevard, and Sheridan Boulevard), diagonal roads have helped expand the community's street capacity. These facilities often offer more direct movement between major centers of activity than are provided by the grid system.

Bridges and overpasses have also been added over the years to make travel safer and easier. Separating cars and trains reduces the potential for accidents, as well as cutting back on time spent by motorists waiting for passing trains. Even the spanning of the region's numerous creeks and streams with permanent structures has allowed people and vehicles to move more freely.

Today there are an estimated 2,750 miles of streets and highways serving the city and county.



Existing County Roads Functional Classification

This includes approximately 60 miles of Interstate, 205 miles of U.S. and State Highways, 620 miles of major arterials and collector streets, and 1,865 miles of local streets.

FUNCTIONAL CLASSIFICATION

Transportation planners and engineers place streets and highways into "Functional Classifications." Each classification indicates how the roadway is intended to be used and of the relative importance of a roadway to the neighborhood, community, and region.

At the top of the classification scheme are "Urban/Rural Interstates and Expressways." These are roads capable of carrying large numbers of vehicles at high rates of speed over long distances. Access to these roadways is highly controlled. Vehicles can only get on these facilities at a few designated locations — typically at an interchange.

“Principle Arterials” and “Minor Arterials” are at the next level of roadway. Arterials may run for many miles across the city and county. Posted speed limits are generally in the middle ranges — 35 to 45 miles per hour — with access provided at grade. Traffic signals are often used to regulate the flow of vehicles along arterials. Access is managed, although movement to adjacent property along arterials is sometimes allowed depending upon the character of the area and the uses being served.

“Collector Streets” offer motorists a safe and convenient way to move from a neighborhood to the arterial street system. This level of street is intended to “collect” traffic from residential or other destinations. Speeds are generally lower than arterial streets with direct access more liberally granted.

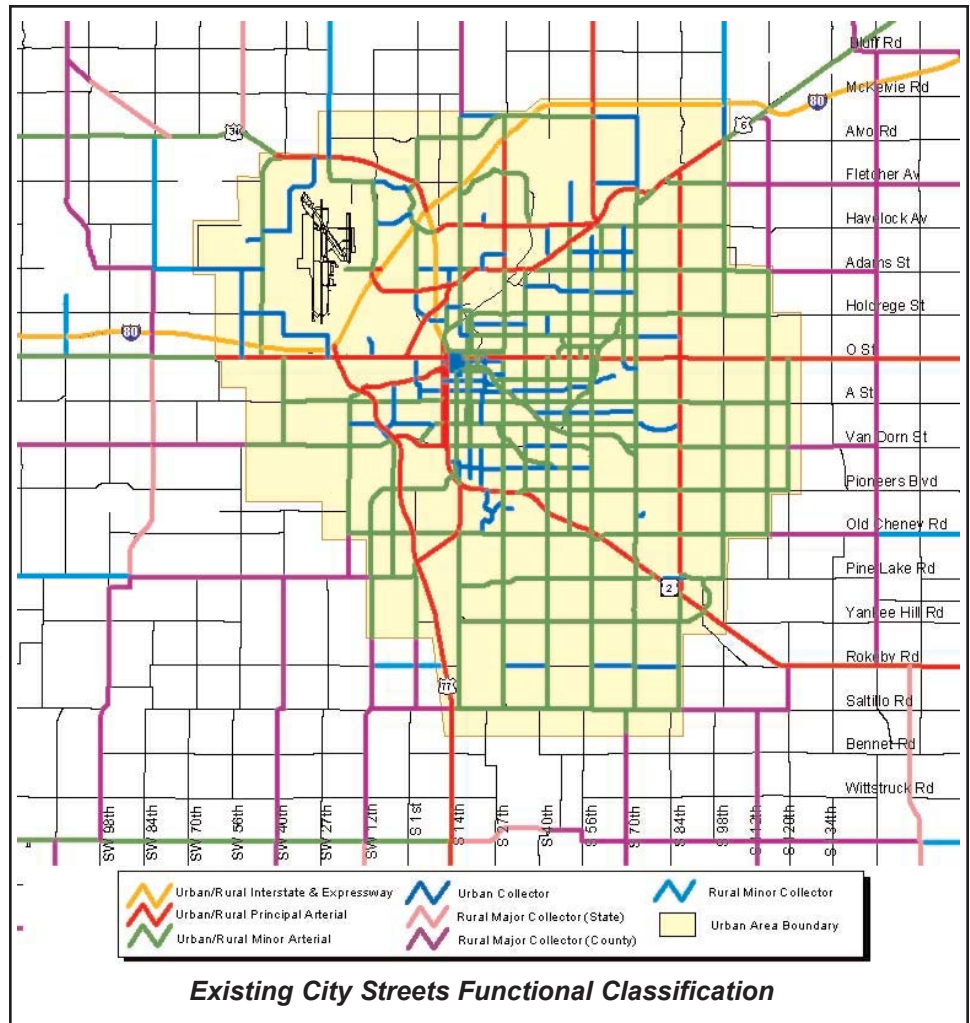
CONGESTION MANAGEMENT TASK FORCE

During a twenty month period in 1995 and 1996, the Congestion Management Task Force examined traffic flow issues for six “high impact corridors” in the older areas of Lincoln. A series of recommendations from the Task Force’s work was amended into the 1994 City-County Comprehensive Plan in 1996. The City has implemented or is implementing the following Task Force recommendations:

Create a “2 Plus Center Turn Lane” System in Older Areas: The Task Force’s top priority was the creation of a street system in the older areas of Lincoln using a “2 plus center turn lane” design. Portions of South 13th, South 33rd, South 40th, South 48th, South 56th, and Pioneers were slated for such improvements. Since 1996, the City has improved or has plans to improve all of these street segments. Additional streets in the older areas have been identified for upgrading to the “2 plus center turn lane” design.

Install More Responsive Traffic Signal System: The City’s Public Works Department has undertaken numerous improvements to the traffic signal system since 1996. This includes installation of sensors and communication lines to monitor traffic flow, traffic monitoring cameras, upgraded software and hardware for traffic signal management, and intersection preemption units. Additional improvements to the traffic signal system are programmed and will be undertaken over the coming years.

Implement Intersection Improvements: Thirteen intersections within the high impact corridors were identified as needing improvement. Many of these improvements have been made, while others are planned as part of future capital improvements program efforts.



Complete Inner Ring Road System: The Task Force recommended lanes be added to segments of five specific streets to create an “inner ring road.” This system of streets would add capacity along the edge of Lincoln’s older area. Improvements to four of these streets — 84th, Old Cheney Road, Pine Lake Road, and Pioneers Boulevard – have been made or are planned. Portions of 70th Street have been upgraded, although no additional improvements are presently scheduled for North 70th Street.

Implement Transportation Systems Management (TSM) / Transportation Demand Management (TDM) Strategies: The City has and is pursuing the application of numerous TSM and TDM strategies. These strategies are intended to make the best possible use of the transportation system by tackling both how the system is managed and how the traveling public makes effective use of the system. Examples include staggered work schedules for public and private sector employers, express transit services, special bus services for major events, message boards for construction and accident sites, and recent upgrades to the city-wide traffic signal system.

Implement Truck Route Study: Routing truck traffic around the City was viewed as a way to improve automobile traffic flow in the older areas of Lincoln. The construction of the south and east beltway was sought as the most helpful approach to accomplish this objective. The south and east beltways are now being planned and funding is being determined for their eventual construction.

Establish a One-Way Pair System on South 56th and Cotner Boulevard: As part of the current East ‘O’ Street project, the City is in the process of making South 56th and Cotner Boulevard a one-way pairing. Once completed, traffic will flow north along Cotner Boulevard and south along 56th Street.

Apply “Average Speed” Concept: A major departure from previous Comprehensive Plans was the Task Force’s introduction of “average speed” as a planning evaluation concept. Under this approach, actual travel times — measured as average speed in miles per hour — was to be collected along selected arterials. This approach created an empirical, measurable means for assessing the street system’s level of performance.

In response to this recommendation, the City of Lincoln began a comprehensive traffic monitoring, accident safety, and signal optimization program in the spring of 1998. This city-wide program evaluates and optimizes traffic flows along all major street corridors on a three year cycle. This approach provides for incremental improvements to be made to the street system. These include the timing of traffic signals to optimize the flow of vehicles, “Intelligent Transportation System” improvements, and other minor geometric changes.

STREET SYSTEM MAINTENANCE

Maintaining city streets is primarily the responsibility of the Lincoln Public Works and Utilities Department. Road maintenance outside the corporate limits of Lincoln is the job of the Lancaster County Engineer, with the exception of the State Highways which are maintained by the Nebraska Department of Roads.

Maintenance responsibilities include but are not limited to ice and snow control, paved and unpaved street and highway maintenance, storm sewer, open drainage, detention cell maintenance and right-of-way vegetation control.

The City currently operates three street maintenance facilities, located at 531 Westgate Blvd., 3180 South Street, and 3200 Baldwin Avenue. The County operates three district stations and 15 patrol stations within the County.

PUBLIC TRANSPORTATION SERVICES

STARTRAN

StarTran is the only fixed-route public transit carrier in the Lincoln metropolitan area. During Fiscal Year 2000-2001, the service carried about 1.6 million passenger trips.

The system is owned and operated by the City of Lincoln. StarTran is operated as a division of the City's Department of Public Works and Utilities. The system receives both Federal and State funding, although the majority of the funding comes from City resources. StarTran only provides transit services within the City of Lincoln.

StarTran offers 20 regular routes and one downtown circulation route on weekdays, and 12 routes on Saturdays. Fixed route services are provided on weekdays and Saturdays. The system's entire fleet of fixed route vehicles are wheelchair accessible. A special transportation program is operated for persons with disabilities who are unable to utilize regular transit services.

The majority of the transit routes are radially oriented to the Downtown, reflecting mass transit's traditional focus of serving higher density areas. As the transit service is extended into the low-density development on the city's edge, the operating costs for the same service increase in order to provide the same coverage.

Currently about 90 percent of Lincoln residents and employees are located within a quarter mile of a StarTran Bus route. Additional cross-town routes such as the 27th Street Shuttle service have been added to better serve the transportation needs of the new commercial areas.

A citizen task force recently evaluated the effectiveness and efficiency of StarTran services. A series of recommendations were made regarding route structure, financing, marketing, and other service changes. Following are some of the recommendations that have been implemented so far:

- Improve the StarTran system efficiency by deleting the seven most inefficient routes.
- Implement a north-south shuttle (27th Street and 48th Street Shuttles) to supplement the current radial route network.
- Increase non-peak ridership through promotional services.
- Expand StarTran route and schedule information services.

PARATRANSIT

StarTran's regular fixed-route bus services are complemented by the Handi-Van paratransit program. This program is available to individuals with disabilities that prevent them from using the regular fixed-route bus service. The program requires riders to register with StarTran in advance of requesting service. There are no income or age restrictions for using the service.

Similar paratransit services are also provided by a number of private entities. A total of 52 health care facilities, senior services, and other private agencies in Lincoln and Lancaster County employ 111 vehicles to provide door-to-door



service to their patrons.

The Lincoln Area Agency on Aging, through an agreement with the Lancaster County Board of Commissioners, provides van transportation for all persons residing in rural Lancaster County. Service is currently provided Monday through Thursday with services offered in a different area of the County each day. Service is available in communities and outlying residences of each area. The rural transportation service provides for early morning pick ups in one of the areas of the county, with a mid-afternoon return to the rider's residence.

TAXIS

Taxi services are available in Lincoln and Lancaster County. Such services carry approximately 204,817 passenger trips each year.

StarTran contracts with local taxi operators to help meet the mobility needs of individuals with disabilities but who are otherwise ambulatory. This program provides approximately 21,000 trips per year.

UNL CAMPUS SHUTTLE

University of Nebraska-Lincoln's Parking and Transit Services operates four shuttle lines on the UNL city campus. The service operates weekdays to carry students, faculty, and staff from various locations on the campus fringe to the core of campus. The UNL Inter-Campus bus service between the City and East Campuses is contracted for through StarTran. Students, faculty, and staff can commute between the two campuses at no charge.

PARKING IN THE DOWNTOWN AREA

Downtown Lincoln has the area's highest concentration of workers, students, and entertainment goers. It serves as the commercial, educational, cultural, entertainment, and political center for the immediate region. Because of the large number of people in Downtown throughout the day, significant demands are placed on Downtown's supply of on and off-street parking. Planning and managing this supply must be coordinated with the overall mobility plan for the area.



Parking for the Downtown area — including the UNL City Campus — is provided through a combination of public and private off street (surface lots and garages) and on-street (metered and non-metered) parking. With the supply of on-street parking limited, recent efforts have focused on the construction of additional parking garages.

The immediate Downtown area (excluding UNL City Campus) has a total of 22,423 stalls. This includes 3,906 on-street spaces, 4,080 public off-street spaces, and 14,437 private/patron spaces. These spaces meet the current estimated peak parking demand of 15,710 parkers.

The UNL City Campus area has a total of 11,465 stalls. This includes 9,887 UNL owned parking spaces and 1,578 City and private spaces. This supply of parking meets current demand. The Antelope Valley project and campus building construction will, however, affect this supply in the future.

TRAILS AND BICYCLE FACILITIES

TRAILS

The Lincoln area trails network contributes significantly to the community's quality of life. In addition to its recreational value, the trail system plays an important role in the overall transportation system. The trail system offers an alternative to the automobile and can contribute to an overall traffic congestion management strategy.

The existing Lincoln/Lancaster County network has approximately 94 miles of trails — most made of 8 to 10 foot wide concrete pathways.

The majority of the current system is located within the City limits with several connections extending well into the County. The trails system generally connects most existing parks and other recreational facilities. Plans call for expansion of the system to complete an interconnected community trail system.



The MoPac East Trail is currently the longest trail within the network. Twenty miles in length, the MoPac East Trail starts at 84th Street in Lincoln and stretches east through Walton, Eagle, Elmwood, and Wabash. This trail is planned to be extended to the Platte River Connection.

In addition to recreational purposes, trail systems need to be considered as part of the entire transportation system. Some existing trails are incorporated as part of existing roadway corridors. The Antelope Valley project and the South and East Beltways will also provide opportunities for further developing such multi-use corridors.

The trails network receives Federal, State, and local funding, as well as funding from private fund raising efforts. The facilities are maintained by the Parks and Recreation Department, with some portions in the County kept up by the Lower Platte South Natural Resources District.

BICYCLE FACILITIES

The current bike route network for the city and county ties closely to the streets and trails network. It includes existing paved and unpaved routes, proposed trails and trail easements, and on-street routes. Bicycles are not allowed on the sidewalk in the following commercial areas because of the large number of pedestrians:

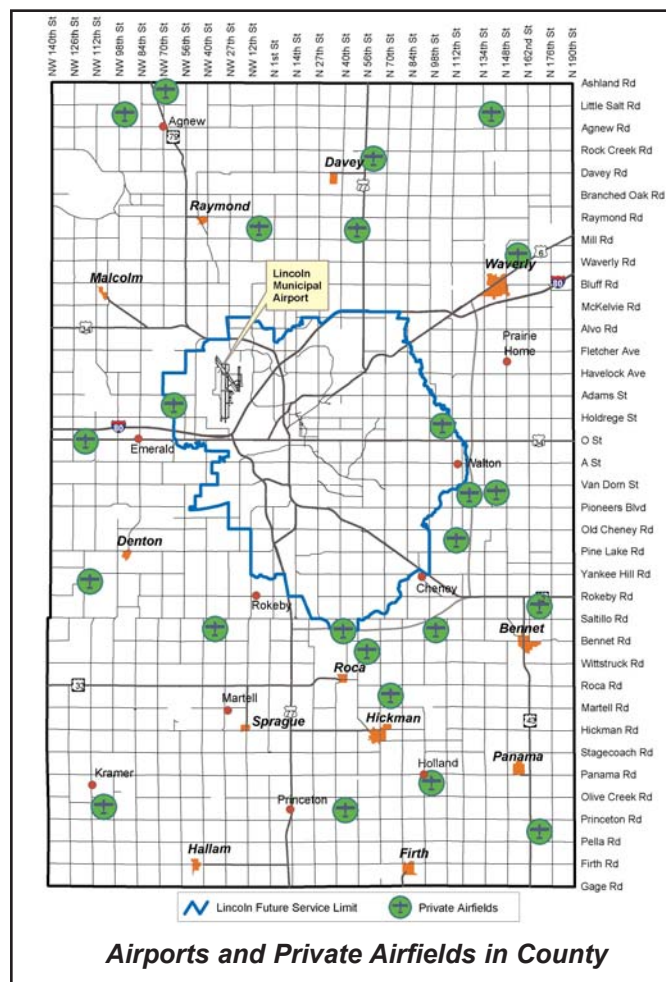
- Downtown
- Havelock
- College View
- Bethany

AIRPORTS AND AIRFIELDS

The Lincoln Municipal Airport (LMA) is the dominant air facility servicing Lincoln and Lancaster County. It furnishes an important transportation link to national and international markets. LMA is located in the northwestern part of Lincoln, with access provided by Interstate and State highways.

The City of Lincoln's Airport Environs Noise District and Airport Zoning Regulations have been established to ensure the balance between the airport operations and the surrounding land uses. The regulations govern uses and structural characteristics compatible to the airport operations and minimize negative impacts on surrounding residents.

Smaller private airports and airfields are also located throughout the County. The distinction between an airport and an airfield is generally the number of planes using the facility and who is allowed to use them. "Airfields" are limited to use by the residents of a single family home with not more than one plane. All other air facilities, including single family airfields which accommodate guest planes or house more than one plane, are termed "airports." Within Lancaster County, airports are discouraged within close proximity to homes, schools, hospitals or other areas potentially sensitive to noise.



RAILROADS

The city and county are currently served by two Class I railroads and one Class III railroad - the mainline of Burlington Northern Santa Fe Railway (Class I), a secondary branch line of the Union Pacific Railroad (Class I), and the Kyle Railroad (Class III), which operates a rail line in southeast Lancaster County via the Omaha Public Power District (OPPD) track from southeast Lincoln to Nebraska City.



Both freight and passenger rail service are offered in Lincoln and Lancaster County. Currently up to 69 trains a day travel east-west through the County.

In recent years, railroads in Lincoln and Lancaster County have been affected by changes in the railroad industry and growth within the City.

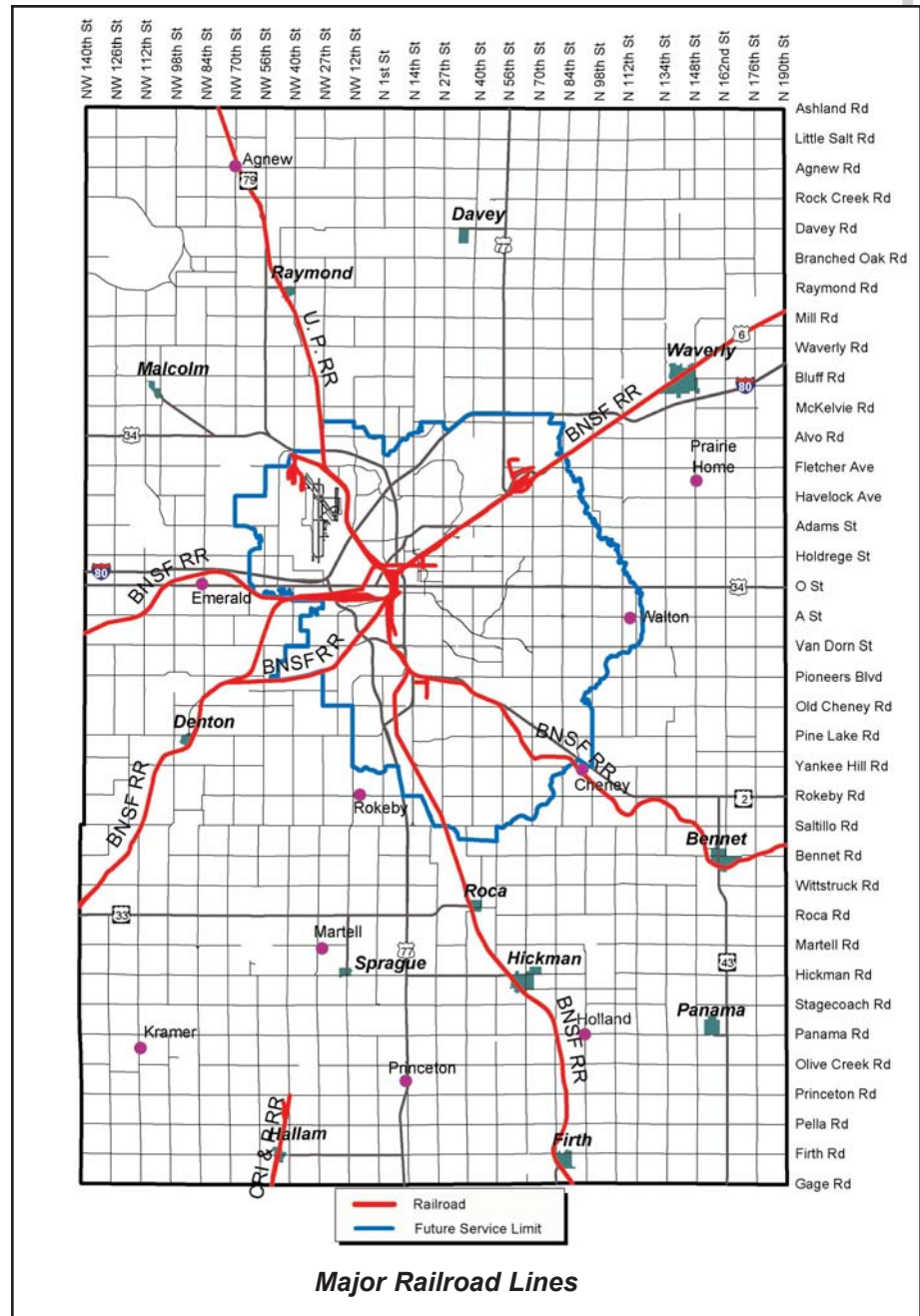
Eliminating at-grade vehicular-train conflicts is a primary objective of the Plan. Removal of such conflicts will enhance safety, reduce delays, and improve emergency access to the surrounding neighborhoods. The Union Pacific Railroad tracks along 4th Street in west

Lincoln have been abandoned. This line ultimately extends from Lincoln to Beatrice, Nebraska, and then south into Kansas. A grade separation project on 'A' Street over the 3rd Street Burlington Northern Railroad tracks will eliminate the at-grade crossings along 'A' Street. This line is operated by the Burlington Northern Santa Fe Railway.

The Antelope Valley project will also eliminate at-grade crossings and enhance the safety and traffic flow to areas north of 'O' Street. As part of the Antelope Valley project, four existing crossings will be closed, and two new underpasses constructed. These projects include:

- The Antelope Valley roadway elevated intersection in the vicinity of N. 16th Street and State Fair Road.
- 33rd and Adams Street extension underpass.
- Closure of the grade crossing at the 35th Street, Adams Street and Cornhusker Highway intersections.
- Addition of a new underpass under the BNSF rail corridor near N. 29th Street.

The Railroad Transportation Safety District (RTSD), a county-wide entity, was established in 1971 to improve transportation and safety at railroad crossings. The funding mechanism provided by the RTSD allows for grade separation projects such as the above referenced to be built. These projects will enhance public safety and transportation efficiency.



GOODS AND FREIGHT MOVEMENT

Goods and freight are currently transported throughout the city and county by truck, rail, air, and pipeline.

In 1999, 174 freight operations employed nearly 5,500 employees in Lancaster County. The total payroll for these establishments approached \$200 million per year. Trucking comprised the bulk of the freight movement services in the county in terms of employees, payroll, and number of establishments.

TRUCK FREIGHT

Truck freight is the most visible form of delivering goods to customers in Lincoln and Lancaster County. Activities generating high truck traffic — especially grain elevators and warehousing operations — were historically located on the periphery of the City. Many, if not most of these, have been absorbed into Lincoln as the city's corporate limits have been pushed out by growth.

Today I-80, I-180, Highway 34, Highway 2, Highway 77, and Highway 6 all exhibit high commercial truck traffic. Leakage of truck traffic from the State highway system to the city road system have been noted in past studies on Pioneers Boulevard, Holdrege, Adams, 27th and 84th Streets.

RAIL FREIGHT

The majority of rail freight originating in Lancaster County is heavy, bulky agricultural produce. Grain elevators and mills within Lincoln and throughout Lancaster County serve as the primary customers of railroad transportation services. Nine grain elevators throughout Lancaster County and five in Lincoln are served by Burlington Northern Santa Fe Railway (BNSF).

AIR FREIGHT

While the Lincoln Municipal Airport is the county's dominant air facility in Lancaster County, Omaha's Eppley Airfield currently serves much of the air freight needs for Lincoln and Lancaster County. Air freight entering Lincoln Municipal Airport arrives through passenger service in small loads. United States Postal Service (USPS) mail is delivered to Lincoln through passenger service. USPS mail is not regularly shipped out of Lincoln Municipal Airport, but rather it is trucked to Omaha's Eppley Airfield for processing. The majority of private parcel delivery service is also handled through Omaha's Eppley Airfield.

PIPELINE FREIGHT

There are 17 pipelines in Lincoln and Lancaster County. The majority transport petroleum or natural gas products. One of the lines transports anhydrous ammonia, which is a product used in agricultural production. All of the pipelines are managed by four firms in Lancaster County.

INTERMODAL AND MULTI-MODAL FREIGHT OPERATIONS

Inter/multi-modal efficiency is a key component in freight transportation. Lincoln and Lancaster County residents receive parcel deliveries, general merchandise, petroleum and natural gas, and agricultural produce through a number of different modes. Intermodal freight shipments may be characterized as truck-to-rail, truck-to-air, pipeline-to-truck, and vice versa. Multi-modal shipments may be characterized as truck-to-truck or rail-to-rail activity.

The only intermodal facility in Nebraska as defined by the U.S. Department of Transportation is in Omaha (i.e., a rail-to-truck and vice versa). Parcel delivery is a multi-model operation in Lincoln since out of state parcels are typically transported by air to Omaha's Eppley Airfield and distributed to Lincoln and Lancaster County by truck.

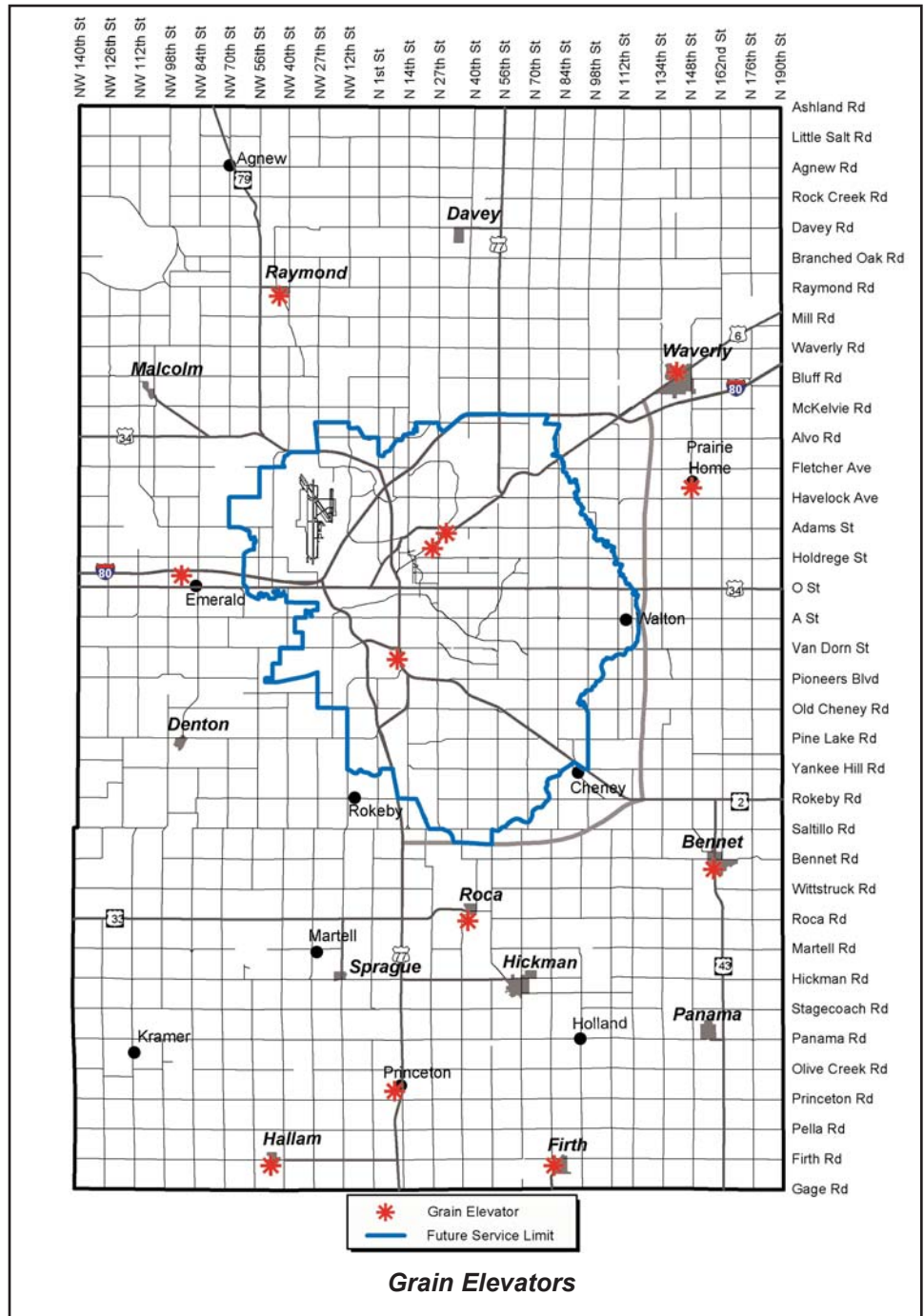
Grain elevators have the potential to be intermodal and multi-modal facilities that connect agricultural products to production sites across the United States. Grain elevators are located within the City and throughout Lancaster County. Most are strictly multi-modal transfer points. Generally, once produce is in Lincoln, it is either processed, stored or loaded to rail to be shipped out of state. Agricultural produce delivered to elevators outside of Lincoln is often transported by truck.

SOLID WASTE

The transporting of solid waste is done largely by truck. Waste destined for landfill disposal is either routed to the primary facility at Bluff Road along Highway 77 or the transfer station located on North 48th Street. The Bluff Road Sanitary Landfill is the destination for all waste except construction and demolition debris. The site receives an average of 25,059 tons per month from 6,406 truck shipments. All vehicle shipments to the Bluff Road Sanitary Landfill are trucks averaging more than four tons of waste per load. The 48th Street station is the designated site for small vehicles. This site receives an average of 7,835 tons of material per month from 4,612 vehicle shipments.

RECYCLING

In the year 2000, approximately 363,400 tons of recycled materials (including construction and demolition material, paper, compost, and waste water sludge) were handled. Private recycling firms are located throughout Lincoln.



HAZARDOUS MATERIAL

The Lincoln/Lancaster County Health Department (LLCHD) estimates that 270,000 shipments of hazardous materials pass through Lincoln each year on Interstate 80. As a general rule, about ten percent of all truck shipments contain hazardous materials. LLCHD also estimates that about 90,000 shipments of hazardous materials pass through Lincoln each year by rail.